

WHAT IS CLAIMED IS:

1 1. A communication node comprising:  
2 a backplane transmission circuit for accomplishing  
3 transmission of a signal between communication units  
4 installed in a plurality of slots; and  
5 a signal waveform control unit for controlling a  
6 waveform of said signal on the basis of position  
7 information on said communication unit installing slots  
8 in said backplane transmission circuit.

1 2. A communication node according to claim 1, wherein  
2 said signal waveform control unit includes:  
3 an installing slot position information collecting  
4 section for collecting said communication unit  
5 installing slot position information; and  
6 a waveform correction information generating  
7 section for generating waveform correction information  
8 corresponding to a transmission distance of said signal  
9 on the basis of said installing slot position  
10 information collected in said installing slot position  
11 information collecting section so that the waveform  
12 control is implemented on the basis of the waveform  
13 correction information generated in said waveform  
14 correction information generating section.

1 3. A communication node according to claim 1, wherein  
2 a transmission circuit with a transmission signal

3 amplitude control function is provided in said  
4 communication unit on a signal transmission side so that  
5 said signal waveform control unit implements the  
6 waveform control by controlling an amplitude control  
7 value in said transmission circuit.

1 4. A communication node according to claim 2, wherein  
2 a transmission circuit with a transmission signal  
3 amplitude control function is provided in said  
4 communication unit on a signal transmission side so that  
5 said signal waveform control unit implements the  
6 waveform control by controlling an amplitude control  
7 value in said transmission circuit.

1 5. A communication node according to claim 1, wherein  
2 a reception circuit with a receive signal amplitude  
3 control function is provided in said communication unit  
4 on a signal receive side so that said signal waveform  
5 control unit is implements the waveform control by  
6 controlling an amplitude control value in said reception  
7 circuit.

1 6. A communication node according to claim 2, wherein  
2 a reception circuit with a receive signal amplitude  
3 control function is provided in said communication unit  
4 on a signal receive side so that said signal waveform  
5 control unit is implements the waveform control by

6 controlling an amplitude control value in said reception  
7 circuit.

1 7. A communication node according to claim 3, wherein  
2 a reception circuit with a receive signal amplitude  
3 control function is provided in said communication unit  
4 on a signal receive side so that said signal waveform  
5 control unit is implements the waveform control by  
6 controlling an amplitude control value in said reception  
7 circuit.

1 8. A communication node according to claim 4, wherein  
2 a reception circuit with a receive signal amplitude  
3 control function is provided in said communication unit  
4 on a signal receive side so that said signal waveform  
5 control unit is implements the waveform control by  
6 controlling an amplitude control value in said reception  
7 circuit.

1 9. A communication node according to claim 1, wherein  
2 said signal waveform control unit is provided in each of  
3 said signal transmission side communication unit and  
4 said signal receive side communication unit so that said  
5 signal waveform control units make communication with  
6 each other to determine an amplitude control value of  
7 said signal for accomplishing the waveform control.

1 10. A communication node according to claim 1, wherein  
2 each of said communication units is equipped with an  
3 error correcting circuit for correcting an error of said  
4 signal.

1 11. A communication node according to claim 10, wherein  
2 said error correcting circuit in said communication unit  
3 on a signal transmission side is made to add error  
4 correction information for error correction to said  
5 signal and said error correcting circuit in said  
6 communication unit on a signal receive side is made to  
7 perform the error correction on the basis of said error  
8 correction information added to said signal.

1 12. A communication node according to claim 1, wherein  
2 said backplane transmission circuit includes:  
3 an extension connection section used for  
4 additionally installing a communication unit for said  
5 slot; and  
6 an extension signal wiring section for establishing  
7 communication between the communication unit  
8 additionally installed and connected to said extension  
9 connection section and the other existing communication  
10 unit.

1 13. A communication unit installed in each of a  
2 plurality of slots of a communication node which

3 includes a backplane transmission circuit for  
4 accomplishing transmission of a signal between the  
5 communication units installed in said plurality of slots,  
6 said unit comprising:

7 a transmission circuit for transmitting a signal to  
8 the communication unit installed in another slot of said  
9 backplane transmission circuit; and

10 a transmission side waveform control circuit for  
11 controlling a waveform of said signal transmitted from  
12 said transmission circuit on the basis of installing  
13 slot position information on the communication unit  
14 installed in said another slot.

1 14. A communication unit installed in each of a  
2 plurality of slots of a communication node which  
3 includes a backplane transmission circuit for  
4 accomplishing transmission of a signal between the  
5 communication units installed in said plurality of slots,  
6 said unit comprising:

7 a reception circuit for receiving a signal from the  
8 communication unit installed in another slot of said  
9 backplane transmission circuit; and

10 a receive side waveform control circuit for  
11 controlling a waveform of said signal received in said  
12 reception circuit on the basis of installing slot  
13 position information on the communication unit installed  
14 in said another slot.

1 15. A communication unit installed in each of a  
2 plurality of slots of a communication node which  
3 includes a backplane transmission circuit for  
4 accomplishing transmission of a signal between the  
5 communication units installed in said plurality of slots,  
6 said unit comprising:

7 a transmission circuit for transmitting a signal to  
8 the communication unit installed in another slot of said  
9 backplane transmission circuit;

10 a reception circuit for receiving another signal  
11 from the communication unit installed in said another  
12 slot of said backplane transmission circuit; and

13 a waveform control circuit for controlling at least  
14 one of waveform of said signals based on the  
15 communication unit installing position information on  
16 the communication unit installed in said another slot.